

AMENDMENTS TO THE CLAIMS

What Is Claimed Is:

1-41. Cancelled

42. (New) A computer-based method for identifying a situation representing risk to a brokerage or its investors, comprising:

receiving, on a periodic basis, data from at least one source, wherein the received data comprises a plurality of transactions relating to securities trading and a plurality of entities involved in securities trading, wherein the plurality of transactions and the plurality of entities are not predetermined to be related;

accessing a scenario library to identify a detection algorithm for identifying a behavior of interest indicative of a risk to a brokerage or its investors;

applying the detection algorithm to identify common elements between a plurality of the transactions and a plurality of the entities in the received data to determine whether the common elements are collectively indicative of the behavior of interest;

determining, by a computing device, whether one or more relationships exist among the transactions and the entities that exhibit the common element; and

if so, generating an alert informing a user of the related transactions and entities that exhibit the common elements.

43. (New) The method of claim 42, wherein the determining whether one or more relationships exist comprises performing one or more of the following on the plurality of transactions and the plurality of entities:

sequence matching to identify sequences in one or more transactions and to relate the identified sequences to one or more of the entities in the received data;

link analysis to establish connections between one or more transactions and entities in the received data;

rule-based analysis to identify at least one of the transactions and entities based on rules specifying parameters and thresholds;

outlier detection analysis to identify at least one of the transactions and entities outside of a defined statistical range;

decision tree analysis; and

detection processing using neural networks.

44. (New) The method of claim 42, wherein

one or more of the plurality of transactions involve one or more customers of a securities brokerage;

the behavior of interest comprises holding concentrated positions in a single security; and

the received data comprises market value of a concentrated position and total cash and security value.

45. (New) The method of claim 42, wherein

one or more of the plurality of transactions involve one or more customers of a securities brokerage;

the behavior of interest comprises holding a concentrated position in low-priced securities; and

the received data comprises low-priced equities balance and total cash and security value.

46. (New) The method of claim 42, wherein

one or more of the plurality of transactions involve one or more customers of a securities brokerage;

the behavior of interest comprises abusing auto-execution systems; and

the received data comprises information associated with a plurality of orders.

47. (New) The method of claim 46, further comprising generating an alert if one or more of the following conditions are met:

each order is on a same side of a market;

a total time span between orders is less than a threshold;

a quantity of each order is less than an auto-execution threshold;

a total quantity of orders exceeds the auto-execution threshold;

a plurality of the orders originate from a same account;

a plurality of the orders originate from a plurality of accounts associated with a same household; and

the orders are entered during regular trading hours.

48. (New) The method of claim 42, wherein

one or more of the plurality of transactions involve one or more customers of a securities brokerage;

the behavior of interest comprises marking the close; and

the received data comprises order time, holdings by others in a household and margin maintenance percentage.

49. (New) The method of claim 42, wherein

one or more of the plurality of transactions involve one or more customers of a securities brokerage;

the behavior of interest comprises making improper short sales; and

the received data comprises securities sold by an account holder, securities held long by an account holder and securities purchased by an account holder.

50. (New) The method of claim 42, wherein

one or more of the plurality of transactions involve one or more customers of a securities brokerage;

the behavior of interest comprises making cross-trades away from the market; and

the received data comprises information associated with a plurality of executions.

51. (New) The method of claim 50, further comprising generating an alert if a plurality of executions:

occur during extended trading hours;

involve a same security;

have a same execution price;

have a same execution date and time;

are on opposite sides of a market.

52. (New) The method of claim 42, wherein
one or more of the plurality of transactions involve one or more customers of a securities
brokerage;
the behavior of interest comprises encouraging orders by marking them as unsolicited;
and
the received data comprises a number of unsolicited orders and a number of solicited
orders.

53. (New) The method of claim 42, wherein
one or more of the plurality of transactions involve one or more customers of a securities
brokerage;
the behavior of interest comprises encouraging short-term holding; and
the received data comprises buy orders, sell orders and indication of solicitation.

54. (New) The method of claim 42, wherein
one or more of the plurality of transactions involve one or more securities
representatives;
the behavior of interest comprises soliciting orders but marking them as unsolicited; and
the received data comprises solicitation attempts and unsolicited orders.

55. (New) The method of claim 42, wherein
one or more of the plurality of transactions involve one or more securities
representatives;
the behavior of interest comprises shadowing a customer's account; and
the received data comprises time between trades in a security.
56. (New) The method of claim 42, wherein
one or more of the plurality of transactions involve one or more brokerage order-takers or
employees;
the behavior of interest comprises front-running; and
the received data comprises employee account activity and employee-linked account
activity.
57. (New) The method of claim 42, wherein
one or more of the plurality of transactions involve one or more brokerage employees;
the behavior of interest comprises trading on insider information; and
the received data comprises closing prices and trades in an account associated with an
employee.
58. (New) The method of claim 42, wherein
one or more of the plurality of transactions involve one or more brokerage employees;
the behavior of interest comprises making large deposits; and
the received data comprises employee deposit amounts and employee account net worth.

59. (New) The method of claim 42, wherein
- one or more of the plurality of transactions involve one or more customers of a securities brokerage and securities representatives;
 - the behavior of interest comprises rapid switching of mutual funds; and
 - the received data comprises fund purchase date, mutual fund sale date and solicitation records.
60. (New) The method of claim 42, wherein
- one or more of the plurality of transactions involve one or more investment advisors;
 - the behavior of interest comprises disproportionate allocation of IPO shares; and
 - the received data comprises IPO initial trading price, IPO closing price and subaccount IPO allocation.
61. (New) The method of claim 42, wherein
- one or more of the plurality of transactions involve an investment advisors;
 - the behavior of interest comprises unfair allocation of block trades to subaccounts of the investment advisor; and
 - the received data comprises block trade purchase price, block trade allocation and security price at time of allocation.
62. (New) The method of claim 42, wherein
- one or more of the plurality of transactions involve an investment advisor;

the behavior of interest comprises maintenance of concentrated positions in a subaccount of the investment advisor; and

the received data comprises a value of individual equities within the subaccount, a value of the subaccount and a total number of subaccounts managed by the advisor.

63. (New) The method of claim 42, further comprising:

prioritizing the one or more relationships, wherein the prioritizing is based on user defined logic and values; and

generating one or more alerts based on one or more of the prioritized relationships.

64. (New) The method of claim 42, wherein

determining whether one or more relationships exist comprises prioritizing the determined relationships; and

generating an alert comprises generation an alert only if a relationship having a predetermined priority is identified.

65. (New) The method of claim 42, further comprising:

identifying any accounts associated with the determined transactions and entities that meet a set of user-defined criteria;

generating an alert informing the user of the identified accounts.

66. (New) The method of claim 42, further comprising:

identifying one or more accounts that meet a set of user-defined criteria for a current month but that did not meet the set of user-defined criteria for a previous month, wherein the accounts are associated with the determined transactions and entities;

generating an alert comprising the identified accounts.

67. (New) The method of claim 42, further comprising:

identifying a household, having a plurality of associated accounts,

wherein the household meets a set of user-defined criteria,

wherein the household is associated with one or more of the determined transactions and entities;

wherein none of the associated accounts individually meet the set of user-defined criteria;

and

generating an alert comprising the identified household.

68. (New) The method of claim 42, further comprising:

identifying a first set of households, wherein each household is associated with one or more accounts, wherein each household meets a set of user-defined criteria, wherein none of the accounts associated with the household individually meet the set of user-defined criteria, wherein each household in the first set is associated with one or more of the determined transactions and entities; and

identifying from the first set of households, a second set of households comprising households that did not meet the set of user-defined criteria in a previous month.

69. (New) The method of claim 42, wherein generating an alert comprises:

providing one or more alert visualizations associated with the transactions and the entities that exhibit the common elements to a user.

70. (New) The method of claim 42, further comprising:

assigning a score to the determined relationships;

determining an alert value associated with the alert based on the assigned score; and

if the alert value is below a threshold value, automatically closing the alert.

71. (New) A computer program embodied on a computer readable medium for identifying a situation representing risk to a brokerage or its investors, wherein the program comprises one or more sequences of instructions that cause one or more processors to perform the steps of:

receiving data from at least one source, wherein the received data comprises a plurality of transactions relating to securities trading and a plurality of entities involved in securities trading, wherein the plurality of transactions and the plurality of entities are not predetermined to be related;

accessing a scenario library to identify a detection algorithm for identifying a behavior of interest indicative of a risk to a brokerage or its investors;

applying the detection algorithm to identify common elements between a plurality of the transactions and a plurality of the entities in the received data to determine whether the common elements are collectively indicative of the behavior of interest;

determining whether one or more relationships exist among the transactions and the entities that exhibit the common element; and

if so, generating an alert informing a user of the related transactions and entities that exhibit the common elements.

72. (New) The computer program of claim 71, wherein the instructions further cause the one or more processors to perform one or more of the following on the plurality of transactions and the plurality of entities:

sequence matching to identify sequences in one or more transactions and to relate the identified sequences to one or more of the entities in the received data;

link analysis to establish connections between one or more transactions and entities in the received data;

rule-based analysis to identify at least one of the transactions and entities based on rules specifying parameters and thresholds;

outlier detection analysis to identify at least one of the transactions and entities outside of a defined statistical range;

decision tree analysis; and

detection processing using neural networks.